DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-019191
Date Inspected: 10-Jan-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC)

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: Li Yang and Zhu Zhong Hai

CWI Present:	☑ Yes	☐ No		**Inspected CWI report:**	☐ Yes	☐ No	☑ N/A	
Rod Oven in Use:	☑ Yes	☐ No	☐ N/A	**Electrode to specification:**	☑ Yes	☐ No	☐ N/A	
Weld Procedures Followed:	☑ Yes	☐ No	☐ N/A	**Qualified Welders:**	☑ Yes	☐ No	☐ N/A	
Verified Joint Fit-up:	☐ Yes	☑ No	☐ N/A	**Approved Drawings:**	☑ Yes	☐ No	☐ N/A	
Approved WPS:	☑ Yes	☐ No	☐ N/A					
Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A					

Bridge No: 34-0006
Component: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Cross Beam # 15 (Handrails)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Handrail to Fiber Glass Grating between Panel Points (PP) 98 and PP 99 for Cross Beam # 15. Handrails are installed at Bottom Panel and Side Panel Cross Beam side at FL3 area. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00607 dated January 10, 2011.

The bolt sizes used were M16 x 95 RC Lot # DHGM160046 and the final torque value established was Snug Tight.

A spanner wrench was used to verify the snug tight condition. Please reference the pictures attached for more comprehensive details.

Segment 12BE to Segment 12CE (Root Gap and Offset)

This QA Inspector performed Dimension Control Inspection on Jan 05, 2011 and Jan 10, 2011 for measuring root gap and offset on at the Transverse Splice for the Segment 12BE to Segment 12CE between Panel Point (PP) 114 to PP 115 at the following locations:

Work Point E2 towards Work Point E1 (Edge Panel Bike Path Side).

Work Point E1 towards Work Point E3 (Side Panel Bike Path Side).

Work Point E3 towards Work Point E4 (Bottom Panel).

Work Point E4 towards Work Point E6 (Side Panel Cross Beam Side).

Work Point E6 towards Work Point E5 (Edge Panel Cross Beam Side).

Work Point E5 towards Work Point E2 (Deck Panel).

The QA Inspector measured the root gap using 1(One) taper gauge and measured the offset using a bridge cam gauge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 12BW to Segment 12CW (Root Gap and Offset)

This QA Inspector performed Dimension Control Inspection for measuring root gap and offset at the Transverse Splice for the Segment 12BW to Segment 12CW between Panel Point (PP) 114 to PP 115 at the following locations:

Work Point W5 towards Work Point W6 (Edge Panel Cross Beam Side).

Work Point W6 towards Work Point W4 (Side Panel Cross Beam Side).

Work Point W4 towards Work Point W3 (Bottom Panel).

Work Point W3 towards Work Point W1 (Side Panel Counter Weight Side).

Work Point W1 towards Work Point W2 (Edge Panel Counter Weight Side).

Work Point W2 towards Work Point W5 (Deck Panel).

The QA Inspector measured the root gap using 1(One) taper gauge and measured the offset using a bridge cam gauge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 12BW to Segment 12CW (Bottom Panel, Transverse Splice weld)

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBE12C-001. The welder identification was 049220 and 054460 and observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-B-T-2231T-ESAB. The piece mark was identified as the Bottom Panel, at transverse splice.

Please reference the pictures attached for more comprehensive details.

Segment 12AE (Bottom Panel to Side Panel hold back weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3001A-004. The welder identification was 044515 and was observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-345-SMAW-1G(1F)-Repair-FCM-1. The piece mark was identified as weld connecting Bottom Panel to Side Panel hold back weld at work point E3. ZPMC performed repair welding in accordance with Critical Welding Repair Report B-CWR2703.

Segment 12BE (Bottom Panel to Side Panel hold back weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as Seg3002A-004. The welder identification was 044515 and was observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-345-SMAW-1G(1F)-Repair-FCM-1. The piece mark was identified as weld connecting Bottom Panel to Side Panel hold back weld at work point E3. ZPMC performed repair welding in accordance with Critical Welding Repair Report B-CWR2703.

Segment 12BE to Segment 12CE (Side Panel, Transverse Splice weld)

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBE12C-011. The welder identification was 050289 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233T-ESAB-1. The piece mark was identified Transverse splice at the Side Panel, Bike Path side.

Segment 12BE (Side Panel, T-Ribs hold back weld)

This QA Inspector observed the in process fillet welding operation by the Shielded Metal Arc Welding (SMAW) process. The weld joint was designated as SP3007-001-025/026. The welder identification was 044504 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-P-2112-FCM-1. The piece mark was identified as the T-Ribs hold back weld at Side Panel, Cross Beam

side.

Segment 12CE (Side Panel, T-Ribs hold back weld)

This QA Inspector observed the in process fillet welding operation by the Shielded Metal Arc Welding (SMAW) process. The weld joint was designated as SP3011-001-008/009. The welder identification was 044504 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-P-2112-FCM-1. The piece mark was identified as the T-Ribs hold back weld at Side Panel, Cross Beam side.

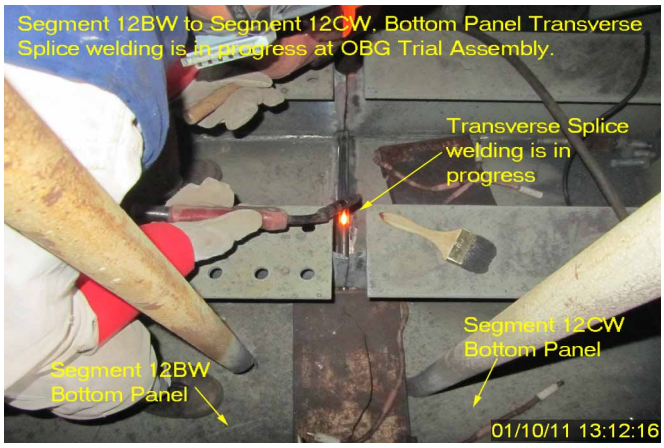
Segment 12BE (Side Panel, T-Ribs hold back weld)

This QA Inspector observed the in process fillet welding operation by the Shielded Metal Arc Welding (SMAW) process. The weld joint was designated as SP3006-001-029/030. The welder identification was 040270 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-P-2112-FCM-1. The piece mark was identified as the T-Ribs hold back weld at Side Panel, Cross Beam side.

Segment 12CE (Side Panel, T-Ribs hold back weld)

This QA Inspector observed the in process fillet welding operation by the Shielded Metal Arc Welding (SMAW) process. The weld joint was designated as SP3010-001-013/014. The welder identification was 040270 and was observed welding in the 2F (Horizontal) position using approved Welding Procedure Specification WPS-B-P-2112-FCM-1. The piece mark was identified as the T-Ribs hold back weld at Side Panel, Cross Beam side.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:
No relevant conversations were reported on this date.

WELDING INSPECTION REPORT

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Dsouza,Christopher	QA Reviewer